

Marine Minerals Program

Preserving and Restoring the Nation's Beaches and Supporting Coastal Resilience

BOEM is the agency within the U.S. Department of the Interior that manages the responsible exploration and development of offshore energy and marine mineral resources on the U.S. Outer Continental Shelf (OCS). The [Marine Minerals Program](#) (MMP) within BOEM is responsible for managing non-energy minerals (primarily sand and gravel) on the OCS. As stewards of these resources, BOEM ensures that the removal of any mineral resource is conducted in a safe and environmentally sound manner, and that any potentially adverse impacts on the marine, coastal, or human environments are avoided or minimized.

For more than 20 years, BOEM has provided OCS sand resources to complete 36 coastal restoration projects and convey more than 94 million cubic yards of material to coastal communities and Federal agencies such as the Navy and NASA. That amount of sand would cover the entire borough of Manhattan, New York, to a depth of nearly 4 feet.

Marine Minerals Program Snapshot:

- 46 leases executed
- 36 coastal restoration projects completed
- More than 94 million cubic yards of material authorized
- More than 256 miles of shoreline restored

What are the primary uses of marine minerals? Marine minerals are used primarily in coastal restoration projects, including beach nourishment and coastal habitat restoration, with increased attention to building resilience to deal with future storms and rising sea levels. Beach nourishment is the replenishment of beach sand by natural or artificial means.

Why is this program beneficial? Access to and identification of potential OCS sand resources is critical for the long-term success and cost-effectiveness of many shore protection, beach nourishment, and coastal habitat restoration projects along the Gulf of Mexico and Atlantic Ocean coasts. Erosion of the Nation's beaches, dunes, barrier islands, and coastal wetlands is a serious challenge that affects energy, defense, and public infrastructure as well as tourism which is important to state and local economies. By replenishing beaches with sand from the OCS, the Nation's coastlines receive crucial resources for the maintenance of a healthy coastal ecosystem.

What is the demand for this natural resource? The demand for marine minerals by Federal, state, and local government varies; however, over the past several years, the Bureau has experienced a significant increase in the number of requests for Memoranda of Agreement (MOA) or leases to use OCS sand resources. This trend is most likely due to a diminishing supply of available material in state waters, increased coastal erosion as a result of more frequent and intense storms, and sea level rise.

Where are projects located? Projects generally consist of two components: dredging on the OCS to obtain sand and/or gravel resources, and placement of the resources onto the shoreline. The MMP has provided OCS material for more than three dozen completed coastal restoration projects in Florida, Louisiana, North Carolina, South Carolina, Maryland, and Virginia. Hurricane Sandy led not only to coastal restoration projects in New Jersey and many of the 12 other eastern states affected by the storm but also to research updating offshore sand maps and data

bases to prepare for future sand needs.

What stakeholders does the Marine Minerals Program collaborate with? The MMP works with state geological surveys, state environmental agencies, the U.S. Army Corps of Engineers, U.S. Geological Survey, National Marine Fisheries Service, U.S. Fish and Wildlife Service, National Park Service, National Aeronautics and Space Administration, the Department of Defense, and dredging companies and contractors.



July 14, 2014



September 30, 2014

**Photographs left and right, before and after shoreline replenishment, NASA Wallops Flight Facility, Virginia
NASA photographs**

How are the resources obtained? The resources are dredged from the OCS using a trailing head suction hopper dredge or a cutterhead dredge. The type of dredge used is based on several factors including environmental conditions, material source location, and funding.

How are environmental impacts evaluated for MMP projects? The Bureau must conduct a review of all environmental impacts through the National Environmental Policy Act (NEPA) process, by developing either an Environmental Assessment or Environmental Impact Statement. Based on the NEPA analysis, mitigation measures and other stipulations are included in the MOA or lease to protect physical, biological, and cultural resources. These stipulations often include the following: dredging window constraints, dredge location constraints, lighting requirements, equipment requirements, monitoring requirements for threatened and endangered species, and buffers surrounding cultural resources and hard-bottom habitat.

BOEM has invested more than \$40 million over the past 20 years to identify non-energy resources on the OCS, conduct world-class scientific research, and lease OCS resources to coastal communities and other Federal agencies in need. Information from environmental research and resource identification has informed environmental assessment and leasing decisions concerning the use of OCS sand resources in beach nourishment and coastal restoration.

For More Information
BOEM Office of Public Affairs, 202-208-3984
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